

Applicant: STARZ, et al.
Serial No.: 09/915,764
Filing Date: July 27, 2001
Amendment and Reply to Office Action – February 26, 2007
Page 2 of 9

RECEIVED
CENTRAL FAX CENTER

FEB 26 2007

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): ~~An~~ A water-based ink for producing a membrane electrode assembly for a fuel cell comprising:

an electrocatalyst,

an aqueous solution of an ionomer comprising predominantly water as the solvent, and a solvent which is substantially water and with a smaller amount of an organic solvent as a co-solvent,

~~wherein said ionomer is employed in aqueous form and~~ said organic solvent is at least one linear dialcohol with a flash point higher than 100°C and being present in the ink in a concentration between 1 and 50 wt.%, with respect to the weight of water.

Claim 2 (previously presented): The ink according to Claim 1, wherein said organic solvent is present in the ink in a concentration between 5 and 25 wt.%, with respect to the weight of water.

Claim 3 (previously presented): The ink according to Claim 1 wherein said linear alcohol is a dihydric alcohol wherein hydroxyl groups are not adjacent to each other.

Claim 4 (previously presented): The ink according to Claim 3 wherein said alcohol has a chain structure that is aliphate – CH₂ groups, optionally with oxygen atoms between said CH₂ groups

Applicant: STARZ, et al.
Serial No.: 09/915,764
Filing Date: July 27, 2001
Amendment and Reply to Office Action – February 26, 2007
Page 3 of 9

Claim 5 (previously presented): The ink according to Claim 1, wherein said dialcohol is a member selected from the group consisting of ethylene glycol, diethylene glycol, propylene glycol, dipropylene glycol, butanediol and mixtures thereof.

Claims 6-8: Cancelled

Claim 9 (previously presented): The ink according to Claim 1, wherein said dialcohol is 1,2-propylene glycol or 1,3-propylene glycol.

Claim 10 (previously presented): The ink according to Claim 1, wherein said electrocatalyst is a noble metal-containing supported catalyst.

Claim 11 (previously presented): The ink according to Claim 1, wherein said electrocatalyst is a support-free catalyst.

Claim 12 (previously presented): The ink according to Claim 11, wherein said electrocatalyst is platinum black or platinum powder with high surface area.

Claim 13 cancelled.

Claim 14 cancelled

Claim 15 (previously presented): The ink according to Claim 13, wherein the ionomer solution has an ionomer concentration of 10% in water.

Claim 16 (previously presented): A polymer electrolyte membrane coated with the ink of Claim 1.

Claim 17 (previously presented): A membrane electrode assembly with the ink of

Applicant: STARZ, et al.
Serial No.: 09/915,764
Filing Date: July 27, 2001
Amendment and Reply to Office Action – February 26, 2007
Page 4 of 9

Claim 1.

Claim 18 (previously presented): A gas distributor substrate coated with the ink of
Claim 1.

Claim 19 (currently amended): The ink according to claim [13]] 1, wherein the
ionomer solution has an ionomer concentration of 20% in water